Volkswagen Settlement: *The State of Tennessee's Proposed Beneficiary Mitigation Plan*

Overview of the Volkswagen Settlement

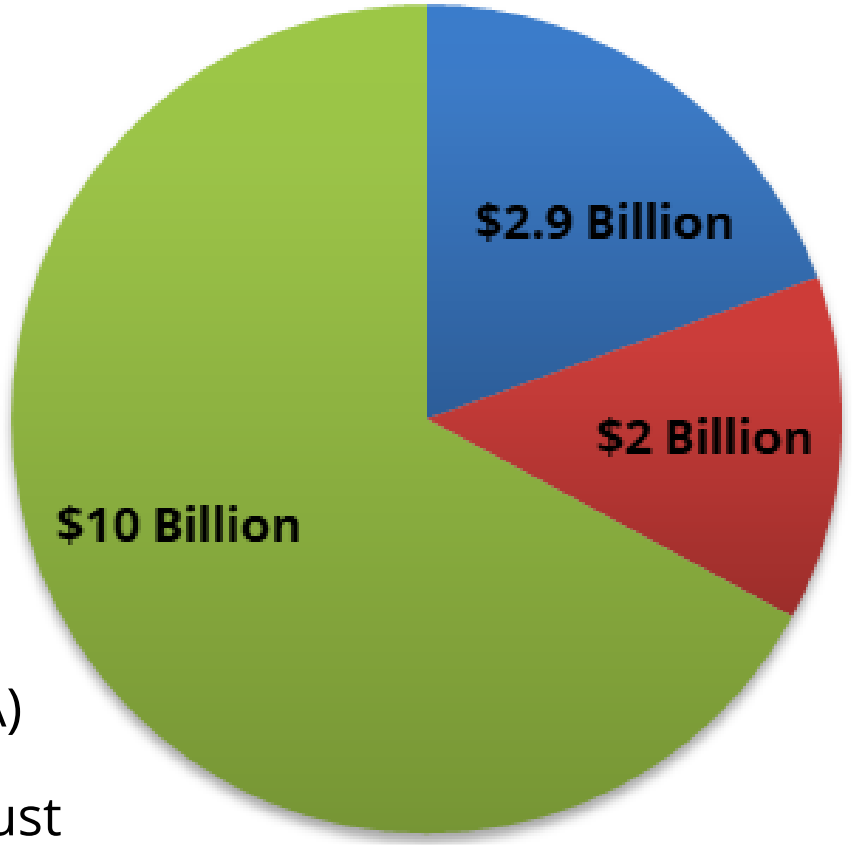
- In 2015, Volkswagen (VW) publicly admitted that it had secretly and deliberately installed a defeat device -- software designed to cheat emissions tests and deceive federal and state regulators -- in approximately 590,000 model year 2009 to 2016 motor vehicles containing 2.0 and 3.0 liter diesel engines.

- The U.S. Department of Justice (DOJ) filed a complaint against VW, alleging that the company had violated the Clean Air Act.

- In October 2016 and May 2017, the U.S. District Court, Northern District of California approved two partial settlements related to the affected **2.0 and 3.0 liter vehicles**, totaling $14.9 billion ("the VW Settlement").

- Settlement funds from the first and second partial settlements (2.0 and 3.0 liter, respectively) will be dispersed amongst three categories:

Settlement Breakdown



- Vehicle Buyback and Modification (Consumers)
- Zero Emission Vehicle Investment (National and CA)
- Environmental Mitigation Trust (States, Tribes, Territories)

In public information sessions previously held by TDEC, additional details were provided on the VW Settlement's Vehicle Buyback and Modification Program and the Zero Emission Vehicle Investment. We will not cover these aspects of the VW Settlement in this presentation. However, slides 5-12, which touch on these topics, are included for your edification.

For additional information on these topics, please refer to TDEC OEP's public information session webinar recording here: https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/2017-12-22%2014.12%20Volkswagen%20Settlement%20Public%20Information%20Webinar.mp4.

1. Vehicle Buyback and Modification (Consumers)

- $10 Billion
- The Consent Decree requires VW to remove or modify at least 85% of the subject 2.0 liter vehicles by June 30, 2019, the subject 3.0 liter generation 1 vehicles (MY 2009-2012) by November 30, 2019, and the subject 3.0 liter generation 2 vehicles (MY 2013-2016) by May 31, 2020.
  - Buyback
  - Lease termination
  - EPA-approved emissions modification

2. Zero Emission Vehicle (ZEV) Investment

- VW will invest $2 billion over 10 years in projects that support the increased use of ZEV, which are defined as battery electric vehicles, plug-in hybrid electric vehicles, and fuel cell vehicles.
- This will be a VW administered program.
- VW created a separate entity within VW Group of America, known as Electrify America, LLC, to oversee the ZEV investment.
  - $300 million National ZEV investment plan during every 30 month cycle for four cycles (with EPA oversight) = **$1.2 billion**
  - $200 million California ZEV investment plan every 30 month cycle for four cycles (with CARB oversight) = **$800 million**

2. Zero Emission Vehicle (ZEV) Investment

- Eligible ZEV Investment expenses include:
  - Design/planning, construction/installation, and operation and maintenance of ZEV infrastructure;
  - Brand-neutral education or public outreach that builds or increases awareness;
  - Programs or actions to increase public exposure or access to ZEVs without requiring the consumer to purchase or lease a ZEV at full market value, such as car sharing services or ride hailing services.

Process for VW National ZEV Investment

- For each 30-month cycle, VW will submit a draft National ZEV Investment Plan:
  - Description of proposed ZEV investments, timelines, etc.;
  - Explanation of how each investment advances the use and market penetration of ZEVs, has high likelihood of utilization, provides accessibility/availability where most needed, and builds positive awareness;
  - The EPA must approve the final plan; upon approval, VW implements plan and reports annually on its progress.

National ZEV Investment Plan: 1st 30-month Cycle

- On April 9, 2017, Electrify America published the **National ZEV Investment Plan: Cycle 1**. The plan, which was approved by EPA, details the investments that will be made in the first 30-month cycle, which runs from Q1 2017 through Q2 2019:

- **Installing Charging Infrastructure (~$250 million)**

  1. Community Charging: 300+ stations across five major use cases (multi-family homes, workplace, commercial/retail, community, and municipal lots/garages) in 11metropolitan areas: NYC, Washington, D.C., Chicago, Portland (OR), Boston, Seattle, Philadelphia, Denver, Houston, Miami, and Raleigh.

National ZEV Investment Plan: 1st 30-month Cycle

2. Long Distance Highway Network:

- In the first 30-month cycle, ~240 stations to be installed or under development along 35 highways & interstates across the U.S.
  - Highways and interstate systems identified that pass through TN:
    - 5-9 on Hwy 70
    - 5-9 on I-40
    - 10+ on I-75
    - 5-9 on I-65
    - 2-4 on I-24
  - Capacity will range from 4 and up to 10 vehicles charging at a time
  - Focus on 150-320 kW DC fast chargers, providing about 9-19 miles of ZEV range per minute of charging
- Sites:
  - Present in 39 U.S. states by 2020
  - About 66 miles apart, with no more than 120 miles between

National ZEV Investment Plan: 1st 30-month Cycle

(Map sourced from https://www.electrifyamerica.com/locations)

National ZEV Investment Plan: 1st 30-month Cycle

- **Public Education Initiatives (~$25 million):** A comprehensive brand-neutral educational campaign will be split across traditional advertising channels such as television and targeted digital in order to increase the number of people aware of and willing to consider ZEVs.

- **ZEV Access Initiatives (Spend amount not yet estimated):** A program of experiential initiatives like ride-and-drive events are still being developed as part of Electrify America's plan; Electrify America will seek written approval for access programs or projects from EPA before it makes these investments, as required by Appendix C to the first partial settlement.

- **Operational Costs to Run Electrify America (~$25 million)**

3. Environmental Mitigation Trust

- $2.9 billion will fund environmental mitigation projects that reduce NOx emissions.
- The funds will be allocated among Beneficiaries (states, tribes, and certain territories) based on the number of impacted VW vehicles in their jurisdictions.
- **TN's initial allocation based on the 2.0 and 3.0 liter partial settlements is $45,759,914.40.**

3. Environmental Mitigation Trust

- In March 2017, the Court appointed Wilmington Trust, N.A. as Trustee of the Environmental Mitigation Trust (EMT), and in October 2017, the Court approved two Trust Agreements for Beneficiaries: one for the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico ("State Trust Agreement"), and one for federally recognized Indian tribes in the U.S.

- The State of Tennessee officially became a Beneficiary of the EMT on January 29, 2018, allowing the State to fund Eligible Mitigation Actions (EMAs), as defined in the State Trust Agreement, that comply with the State's Beneficiary Mitigation Plan (BMP).

Beneficiary Mitigation Plan (BMP)

Pursuant to Paragraph 4.1 of the State Trust Agreement, each Beneficiary shall submit to the Trustee and make publicly available a BMP. The BMP must be submitted by a Beneficiary to the Trustee no later than 30 days prior to submitting its first funding request.

The BMP must summarize how the Beneficiary plans to use its mitigation funds, addressing:

- The process by which the Beneficiary shall seek and consider public input on its BMP;
- The Beneficiary's overall goal for the use of the funds;
- The categories of EMAs the Beneficiary anticipates that it will use and the expected percentages of funds to be used for each type of action;
- The expected ranges of emissions benefits the Beneficiary estimates would be realized by implementation of the EMAs identified in the Plan; and
- How the Beneficiary will consider the beneficial impact of EMAs on air quality in areas that bear a disproportionate share of the air pollution burden within its jurisdiction.

Beneficiary Mitigation Plan (BMP)

- The State Trust Agreement provides that the BMP is not binding on any Beneficiary, and it does not create rights in any person to claim an entitlement of any kind. As such, Beneficiaries have the flexibility to adjust their goals and specific spending plans at their discretion.

- If Beneficiaries elect to make adjustments, they must provide the Trustee with updates to their BMP.

The State's Approach to Development of a BMP

- Following Governor Haslam's designation of the Tennessee Department of Environment and Conservation (TDEC) as the Lead Agency for administering the State's VW EMT allocation, TDEC formed a multidisciplinary Technical Advisory Committee (TAC) to develop a BMP.
- The TAC is comprised of representatives from the following TDEC divisions: Air Pollution Control, Office of Energy Programs, Office of Policy and Sustainable Practices, and the Office of General Counsel.
- From the third quarter of 2017 through April 2018, TDEC's TAC met on a bi-weekly basis to contemplate issues germane to the development of the State's BMP and consequent programs through which the State's EMT allocation will be dispersed.
- In December 2017, the National Association of State Energy Officials and National Association of Clean Air Agencies launched a VW Settlement Working Group to enable state-to-state communication related to the EMT. TDEC has also engaged in this Working Group and will continue to do so in order to remain informed as to the activities and plans of other State Beneficiaries.

TDEC's Overall Approach to Public Involvement and Participation

TDEC aims to provide opportunities for the meaningful involvement in and access to its programs and services for all people regardless of race, color, national origin, or income. TDEC accomplishes equitable and meaningful involvement of all Tennesseans through several strategies:

- Engaging the public to raise awareness of TDEC projects or services and to provide stakeholders with a meaningful opportunity to provide input during the decision-making process;
- Hosting public meetings/hearings in centralized locations and at times accessible to the community, such as evenings or on weekends;
- Collaborating with the TDEC Office of Communications to share relevant information with local media resources and minority newspapers;
- Utilizing the community contacts maintained by the Regional Directors of TDEC's Office of External Affairs and various other TDEC Divisions;
- Accommodating vulnerable or minority communities by utilizing language assistance services for Limited English Proficiency individuals and groups when necessary; and
- Hosting "Enhancing Engagement in Your Community" conversations across the state, which serve as opportunities for TDEC to learn how to improve its outreach within underserved and/or underrepresented communities and to enhance opportunities for communities to provide input on TDEC programming.

TDEC Webpage and Email List

- In the fall of 2016, TDEC created a public-facing webpage, which is accessible at https://www.tn.gov/environment/VWSettlement.
- The TDEC Webpage was created and is maintained for the following purposes:
  - To inform Tennesseans about the VW Settlement
  - To share information about the State's approach to stakeholder outreach and use of mitigation funds
  - To provide notice to the general public regarding public information sessions and/or webinars
  - To provide a standardized and centralized method for soliciting and receiving comments and input from the general public

- Additionally, TDEC has also established and will continue to maintain a VW EMT email list. TDEC has and will continue to utilize the TDEC Email List when sending out updates regarding TDEC's EMT efforts. The public may request to be added to this email list through a link on the TDEC webpage, via email, or in-person.

Presentations and Public Information Sessions to Date

- TDEC has participated as a speaker at various state and local conferences, forums, webinars, and other meetings to inform the general public about the VW Settlement. A comprehensive listing of this public engagement activity to date is included in Appendix 2 of the proposed BMP.

- In the winter of 2017, TDEC organized a series of five VW Settlement public information sessions, which were held in Nashville, Knoxville, Memphis, Chattanooga, and online via webinar. A recording and copy of the webinar presentation slides were subsequently added to the TDEC webpage for public reference.

- TDEC responded to all session questions either in person or by follow-up email. These questions and answers were subsequently added to the TDEC Webpage.

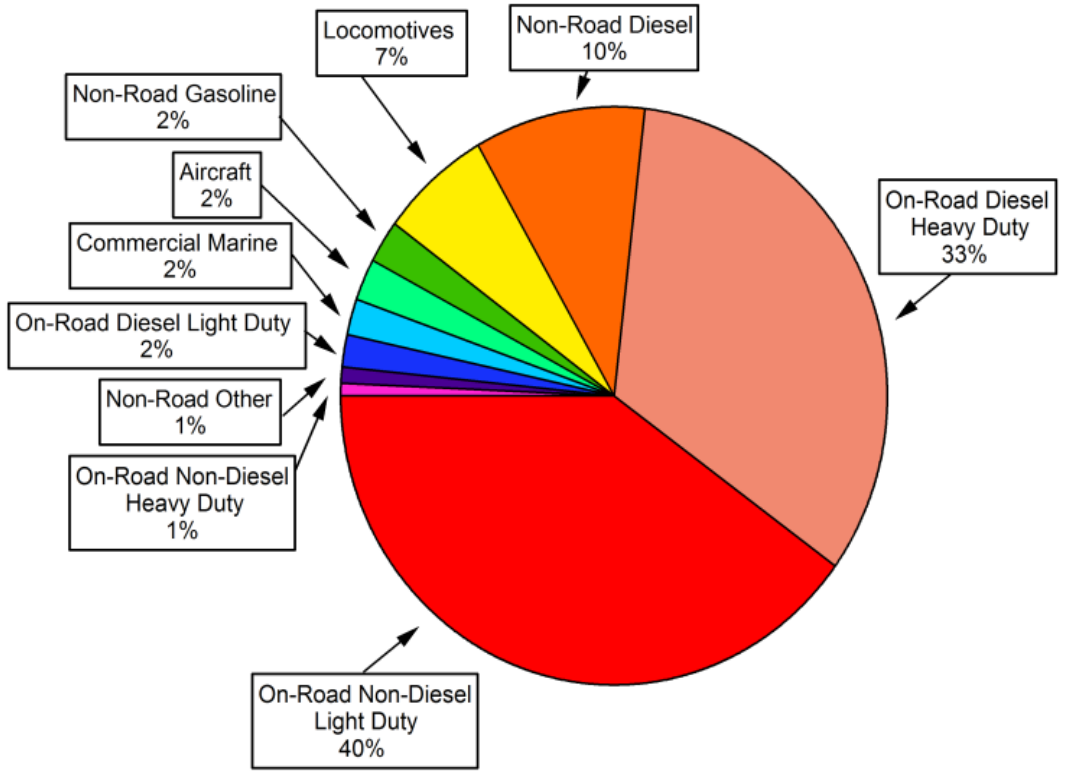
Public Comment Form and Request for Cost Information

- TDEC developed a web-based form to allow interested stakeholders to submit comments regarding the State's utilization of its EMT allocation. TDEC accepted public comments from October 2016 through January 2018. By January 16, 2018, TDEC had received comments from 145 total respondents, representing 121 unique entities. These entities provided advocacy, business, government, higher education, individual, and other perspectives on how the State should administer its EMT allocation.

- On December 12, 2017, TDEC also released a Request for Information (RFI) to seek cost information on EMAs, in order to inform TDEC's BMP planning process. Responses were due to TDEC by January 23, 2018. In total, TDEC received cost information from 34 distinct entities.

Overall Goal for Use of the State's Allocation

- The purpose of the EMT is to execute environmental mitigation projects that reduce emissions of NOx.
- In accordance with the EMT goal, the State's overall goal in administering its EMT allocation is to reduce NOx emissions by targeting the largest contributors of mobile NOx emissions in Tennessee: the on-road, diesel heavy duty sector and the on-road, non-diesel light duty sector:



Source: 2014 NEI v2

Guiding Principles

In furtherance of this goal, the TDEC TAC has considered and will continue to consider the following guiding principles when making decisions regarding the State's EMT allocation:

- The State will fulfill its obligations under the Clean Air Act and the Tennessee Air Quality Act by working to ensure attainment and maintenance with the National Ambient Air Quality Standards (NAAQS).
- The State will attempt to generate health benefits through improved air quality for all Tennesseans, ensuring that such benefits also inure to vulnerable populations (e.g., low income, minority, elderly, and youth) and geographic areas that experience disproportionate levels of air pollutants.
- The State will endeavor to support local government and business economies, including those in Distressed Counties, by offsetting the cost of new and cleaner vehicle and transportation technologies.
- The State will be good stewards of public resources by leveraging non-EMT funding sources.
- The State will select categories that maximize the diversity and potential quantity of eligible applicants.
- The State will solicit projects that are both commercially viable and are of interest to eligible applicants.
- The State will attempt to strengthen emergency preparedness and the resiliency of the transportation sector through diversity of fuel and project types by spurring public and private investment in zero emission and alternative fuel vehicles.

Implementation

Appendix D-2 of the State Trust Agreement lists 10 specific EMA categories and various EMA administrative expenditures that are eligible for EMT funding. (All terms that are both bolded and italicized in the following slides are defined in Appendix D-2 of the State Trust Agreement, which is included as Appendix 1 to the proposed BMP.)

Eligible projects under these EMA categories include:

- Replacing or ***Repowering*** older diesel engines with new diesel, ***Alternate Fueled*** (e.g., compressed natural gas (CNG), propane, diesel-electric hybrid), or ***All-Electric*** engines (including installation of associated charging infrastructure);
- Replacing older diesel vehicles, vessels, and equipment with new diesel, ***Alternate Fueled***, or ***All-Electric*** vehicles, vessels, and equipment (including installation of associated charging infrastructure);
- Installing charging infrastructure for light duty ***All-Electric*** vehicles; and
- Applying EMT funds as non-federal voluntary match for projects eligible under the Diesel Emission Reduction Act ("DERA") program of the Energy Policy Act of 2005.

State Trust Agreement - Eligible Mitigation Action (EMA) Categories

Nine of the 10 EMA categories set forth in the State Trust Agreement have separate sub-categories for Non-Government Owned and ***Government*** Owned projects. For Non-Government Owned, the percentage of the cost of an EMA that can be funded by the EMT is dictated by the sub-category of the EMA (i.e., replacement with a new diesel vehicle versus replacement with a new ***All-Electric*** vehicle). For ***Government*** Owned, up to 100% of the cost of an EMA can be funded with EMT funds, regardless of the sub-category. All eligible engines, vehicles, vessels, and equipment must be ***Scrapped***. The EMA categories are as follows:

(1) Large Trucks: ***Class 8 Local Freight Trucks and Port Drayage Trucks***;
(2) Buses: ***Class 4-8 School Bus, Shuttle Bus, or Transit Bus***;
(3) ***Freight Switchers***;
(4) Ferries and ***Tugs***;
(5) Ocean Going Vessel Shorepower;
(6) Medium Trucks: ***Class 4-7 Local Freight Trucks;***
(7) ***Airport Ground Support Equipment***;
(8) ***Forklifts*** and ***Port Cargo Handling Equipment***;
(9) Light Duty ***Zero Emission Vehicle*** Supply Equipment; and
(10) Diesel Emission Reduction Act (DERA) Option.

Eligible Applicants Under TN's Proposed BMP

Eligible applicants under each EMA shall include both ***Government*** and Non-Government entities.

Government entities must be located (e.g., a municipal or county government) and/or have a physical presence in Tennessee (e.g., certain Federal Agencies).

Non-Government entities must have a physical presence and operate within Tennessee. For information regarding the State's treatment of Federal Agencies, which are not included in the definition of ***Government*** set forth in Appendix D-2 of the Trust Agreement, please see Appendix 3 of the proposed BMP.

Proposed EMA Categories and Corresponding Allocations Amounts

The State's proposed EMA categories and allocation amounts are as follows:

- ***Class 8 Local Freight Trucks and Port Drayage Trucks***: **10%**
- ***Class 4-7 Local Freight Trucks***: **15%**
- ***Class 4-8 School Bus, Shuttle Bus, or Transit Bus***: **60%**
- ***Light Duty Zero Emission Vehicle Supply Equipment***: **15%**

These categories allow the State to target the two sectors that make up approximately 75% of Tennessee's mobile NOx emissions: the on-road, diesel heavy duty sector (33% of mobile NOx emissions and 62% of mobile diesel NOx emissions) and the on-road, non-diesel light duty sector (40% of mobile NOx emissions).

Variables Considered

The proposed categories and allocation amounts were determined by the TDEC TAC after consideration of public input and numerous variables, including, but not limited to:

- The current emissions inventory for Tennessee, as detailed by EPA's National Emissions Inventory (NEI);
- Expected ranges of emissions benefits from potential projects under all EMA categories except for Ocean Going Vessel Shorepower (determined to not be viable in Tennessee), calculated using the EPA's Diesel Emissions Quantifier (DEQ) or EPA emission rates;
- Vehicle, vessel, and equipment inventories in Tennessee, sourced from the Tennessee Department of Transportation's (TDOT) vehicle inventory data (compiled by the University of Tennessee, Knoxville for NEI reporting), as well as from inventory data provided by stakeholders;
- Cost to ***Repower*** or replace eligible engines, vehicles, vessels, or equipment, sourced from responses to TDEC's RFI on cost information;
- Cost effectiveness of EMAs in terms of dollar spent per ton of NOx reduced;
- Potential impact to vulnerable populations or populations affected by a disproportionate share of the air pollution burden;
- [List of variables continues onto the next slide]

Variables Considered (Continued)

The proposed categories and allocation amounts were determined by the TDEC TAC after consideration of public input and numerous variables, including, but not limited to:

- Lessons learned from emissions reduction and sustainable transportation programs;
- Potential to impact local government and business economies;
- Public input;
- Market demand for particular EMA categories, fuel types, and technologies, as expressed by potential applicants through public input (i.e., public interest in or support for);
- Viability of specific technologies, based on cost or commercial availability;
- Availability of other funding sources (e.g., Federal Highway Administration's [FHWA's] Congestion Mitigation Air Quality Improvement Program – administered by TDOT, Tennessee Valley Authority's [TVA's] Electric Forklift Program, Federal Aviation Administration's Voluntary Airport Low Emissions Program);
- Opportunities to strengthen emergency preparedness and resiliency of the transportation sector through diversity of fuel and project types;
- Ability to maximize the State's allocation through required cost share; and
- Ancillary benefits (e.g., quietness of engines, health benefits to children's lungs from a school bus project).

Class 4-8 Local Freight Trucks and Port Drayage Trucks

- The State proposes allocating 25% of its EMT allocation to the Local Freight Truck sector, with 10% dedicated to ***Class 8 Local Freight Trucks and Port Drayage Trucks*** and 15% dedicated to ***Class 4-7 Local Freight Trucks***. The State proposes to allot a slightly larger allocation to ***Class 4-7 Local Freight Trucks*** due to the larger eligible inventory of vehicles within the state in this category, as well as a slightly higher amount of public interest expressed in this category than was expressed for ***Class 8 Local Freight Trucks and Port Drayage Trucks***.

- According to 2014 NEI data, on-road, diesel heavy duty vehicles, which include ***Class 8 Local Freight Trucks***, ***Class 4-8 School Buses, Shuttle Buses, and Transit Buses***, and ***Class 4-7 Local Freight Trucks***, account for 62% of mobile diesel NOx emissions in Tennessee. Thus, on-road heavy duty vehicles are the largest contributor of NOx emissions from mobile diesel sources in Tennessee.

- Local Freight Trucks and Port ***Drayage Trucks*** are used by a diverse array of sectors and entity types, including commercial, industrial, government, ports, and small business. Funding ***Class 8 Local Freight Trucks and Port Drayage Trucks*** and ***Class 4-7 Local Freight Trucks*** will allow the State to address a more diverse applicant pool potentially not served by the other proposed categories.

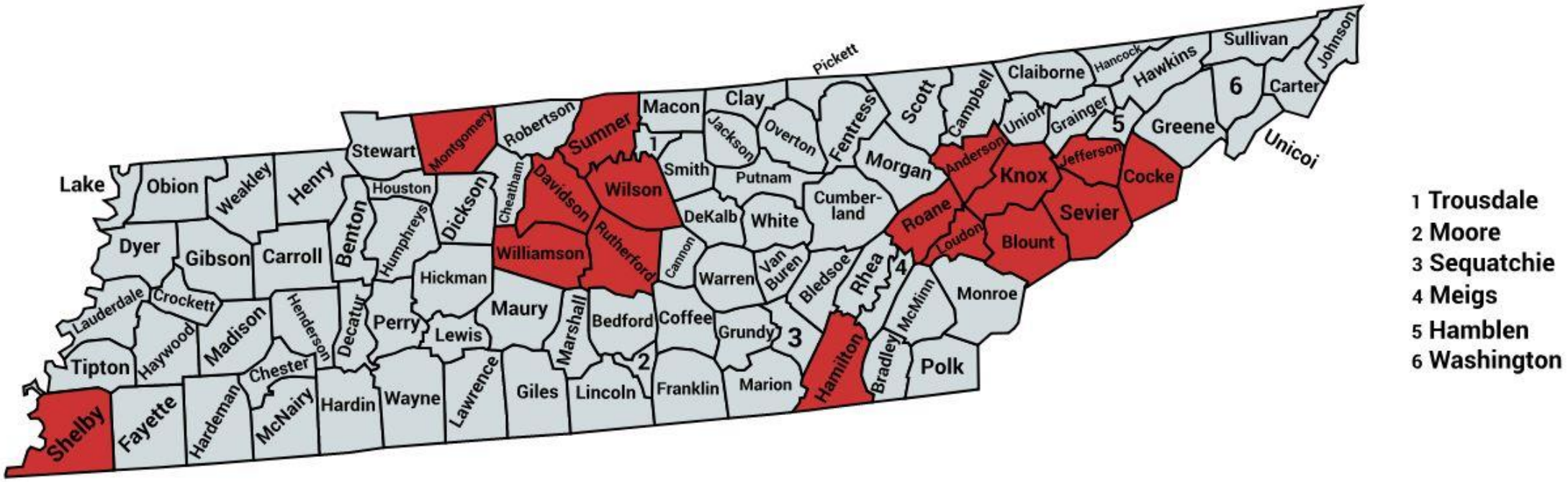
Class 8 Local Freight Trucks and Port Drayage Trucks Summary

Eligible Applicants	Non-Government and ***Government***	
Anticipated % of Funds	10% ($4,575,991.44)	
Available Funds	Initial Eligible Project Funds: $4,118,392.30 Initial Eligible Administrative Expenditures Reserve: $457,599.14	
	Class 8 Local Freight Trucks and Port Drayage Trucks	***All-Electric*** Infrastructure Costs
Funding Cap	Up to 25% of the cost of a ***Repower*** or replacement for Non-Government Owned Up to 50% of the cost of a ***Repower*** or replacement for ***Government*** Owned Up to 75% of the cost of a ***Repower*** or replacement for ***Government*** Owned projects in current or former nonattainment areas for Ozone and/or $PM_{2.5}$ NAAQS Up to 75% of the cost of a ***Repower*** or replacement for ***Government*** Owned projects in Distressed Counties	Up to 25% of the acquisition and installation costs for associated ***All-Electric*** infrastructure for Non-Government Owned Up to 50% of the acquisition and installation costs for associated ***All-Electric*** infrastructure for ***Government*** Owned
Expected Emissions Benefits	At the proposed funding amounts and project caps, dependent on fuel and project type, the State expects to be able to fund between 17 and 140 ***Class 8 Local Freight and Port Drayage Truck*** projects. Doing so is expected to yield NOx emissions reductions between **2.0 – 63.4 NOx tons/year.**	
Program/Project Considerations	Eligible Local Freight Trucks must operate in Tennessee counties for 70% or more of the time. Eligible Port ***Drayage Trucks*** must service Ports. Bi-fuel engines and vehicles will be considered on a case-by-case basis for Emergency Response Vehicles only. See Appendix 4 of the proposed BMP for the State's proposed definitions of the terms "Local," "Port," "Bi-fuel," and "Emergency Response Vehicle."	

Class 4-7 Local Freight Trucks Summary

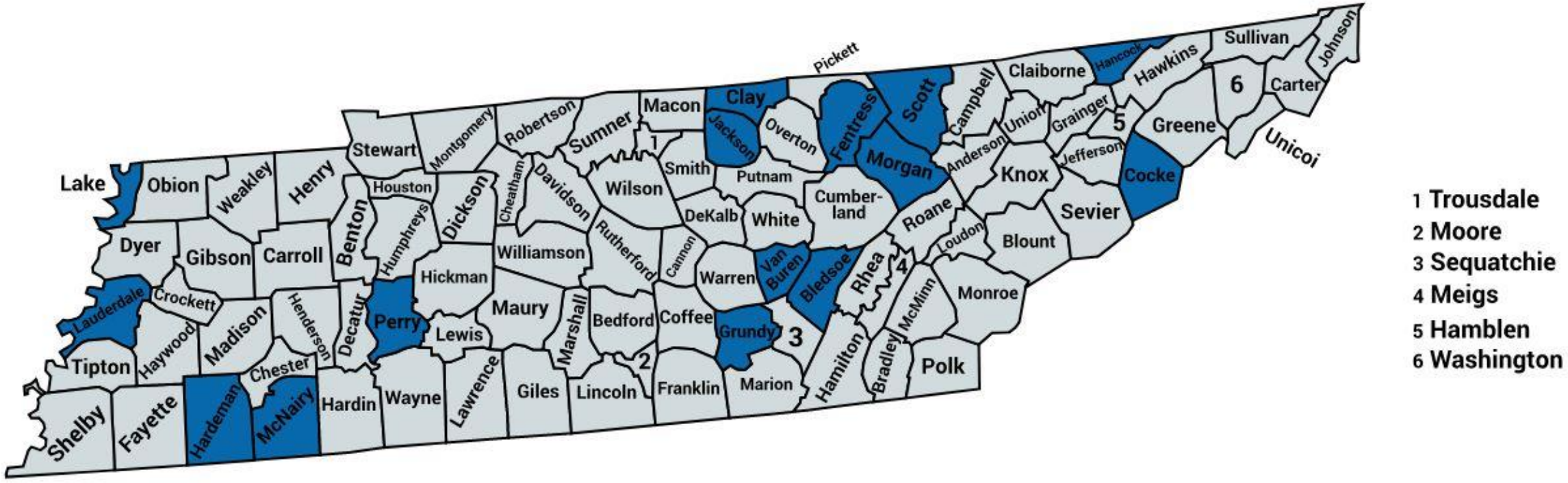
Eligible Applicants	Non-Government and ***Government***	
Anticipated % of Funds	15% ($6,863,987.16)	
Available Funds	Initial Eligible Project Funds: $6,177,588.45 Initial Eligible Administrative Expenditures Reserve: $686,398.71	
	Class 4-7 Local Freight Trucks	***All-Electric*** Infrastructure Costs
Funding Cap	Up to 25% of the cost of a ***Repower*** or replacement for Non-Government Owned Up to 50% of the cost of a ***Repower*** or replacement for ***Government*** Owned Up to 75% of the cost of a ***Repower*** or replacement for ***Government*** Owned projects in current or former nonattainment areas for Ozone and/or $PM_{2.5}$ NAAQS Up to 75% of the cost of a ***Repower*** or replacement for ***Government*** Owned projects in Distressed Counties	Up to 25% of the acquisition and installation costs for associated ***All-Electric*** infrastructure for Non-Government Owned Up to 50% of the acquisition and installation costs for associated ***All-Electric*** infrastructure for ***Government*** Owned
Expected Emissions Benefits	At the proposed funding amounts and project caps, dependent on fuel and project type, the State expects to be able to fund between 44 and 1,617 ***Class 4-7 Local Freight Truck*** projects. Doing so is expected to yield NOx emissions reductions between **2.0 – 721.2 NOx tons/year.**	
Program/Project Considerations	Eligible Local Freight Trucks must operate in Tennessee counties for 70% or more of the time. Bi-fuel engines and vehicles will be considered on a case-by-case basis for Emergency Response Vehicles only. See Appendix 4 of the proposed BMP for the State's proposed definitions of the terms "Local," "Bi-fuel," and "Emergency Response Vehicle."	

Current or Former Nonattainment Areas for Ozone and/or $PM_{2.5}$ NAAQS



Map created at https://mapchart.net, with county information sourced from U.S. EPA's Tennessee Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants, https://www3.epa.gov/airquality/greenbook/anayo_tn.html.

Distressed Counties in Tennessee (Fiscal Year 2019)



Map created at https://mapchart.net, with county information sourced from https://www.tn.gov/transparenttn/jobs-economic-development/openecd/tnecd-performance-metrics/openecd-long-term-objectives-quick-stats/distressed-counties.html.

Class 4-8 School Bus, Shuttle Bus, and Transit Bus

- The State proposes allocating 60% of its EMT allocation to the ***Class 4-8 School Bus, Shuttle Bus, and Transit Bus*** category, which received the highest amount of public support of all EMA categories during the State's first public comment period.

- This category directly serves and impacts the public, as it supports the movement of people. This category also allows the State to fund projects that reduce tailpipe emissions among vulnerable populations, including low-income populations that may depend on public transit as a primary source of transportation, school age children with developing lungs, and the elderly or disabled who may use public transportation as an alternative to personal vehicle use.

- It bears repeating that on-road, diesel heavy duty vehicles, which include ***Class 8 Local Freight Trucks***, ***Class 4-8 School Buses, Shuttle Buses, and Transit Buses***, and ***Class 4-7 Local Freight Trucks***, account for 62% of mobile diesel NOx emissions in Tennessee.

Class 4-8 School Bus, Shuttle Bus, and Transit Bus

Of the $27,455,948.64 to be dedicated to the ***Class 4-8 School Bus, Shuttle Bus, and Transit Bus*** category, the State proposes allocating $16,000,000 to eligible ***Class 4-8 Transit and Shuttle Bus*** projects. The rationale for the proposed allocation within this subcategory of vehicles is as follows:

(1) A ***Transit or Shuttle Bus*** replacement project yields a much higher annual NOx reduction than a ***School Bus*** replacement project. This is due to the demanding duty cycles and higher annual mileage of ***Transit and Shuttle Buses***;
(2) ***School Buses*** are substantially cheaper to replace than ***Transit and Shuttle Buses***. As a result, the proposed allocation for the subcategory of ***School Buses*** (addressed on slides 37 and 39) can provide funding assistance for an equal or higher number of ***School Bus*** projects;
(3) Overall, ***Transit and Shuttle Buses*** are more cost-effective than ***School Buses*** at reducing NOx emissions on an annual basis.

Class 4-8 School Bus, Shuttle Bus, and Transit Bus

The State proposes allocating the remaining $8,710,353.78 within the Bus category to ***Class 4-8 School Bus*** projects.

Considering that ***School Bus*** idling wastes fuel and financial resources while producing exhaust emissions that are harmful to human health and the environment, the State will prioritize eligible ***School Bus*** projects in school districts where an idle reduction policy for or including ***School Buses*** has been adopted as of the date a proposal is submitted.

In selecting eligible ***School Buses*** to replace, the State will likely prioritize certain model years, due to the pre-existing useful life restrictions on ***School Buses*** in Tennessee (Tenn. Code Ann. § 49-6-2109 (b)) and the natural turnover in vehicle stock that results. Model years to be prioritized for replacement shall be announced during the project solicitation phase for the ***Class 4-8 School Bus, Shuttle Bus, and Transit Bus*** program.

Class 4-8 School Bus, Shuttle Bus, and Transit Bus Summary

Eligible Applicants	Non-Government and ***Government***	
Anticipated % of Funds	60% ($27,455,948.64) for the ***Class 4-8 School Bus, Shuttle Bus, and Transit Bus*** EMA Category	
Available Funds	Initial Eligible Project Funds: $24,710,353.78 ($16,000,000 for ***Transit and Shuttle Buses*** and $8,710,353.78 for ***School Buses***) Initial Eligible Administrative Expenditures Reserve: $2,745,594.86	
	Transit and Shuttle Buses	***All-Electric*** Infrastructure Costs
Funding Cap	Up to 25% of the cost of a replacement for Non-Government Owned Up to 50% of the cost of a replacement for ***Government*** Owned Up to 75% of the cost of a replacement for ***Government*** Owned projects in current or former nonattainment areas for Ozone and/or $PM_{2.5}$ NAAQS Up to 75% of the cost of a replacement for ***Government*** Owned projects in Distressed Counties	Up to 25% of the acquisition and installation costs for associated ***All-Electric*** infrastructure for Non-Government Owned Up to 50% of the acquisition and installation costs for associated ***All-Electric*** infrastructure for ***Government*** Owned
Expected Emissions Benefits	At the proposed funding amounts and project caps, dependent on fuel and project type, the State expects to be able to fund between 27 and 673 ***Transit or Shuttle Bus*** projects. Doing so is expected to yield NOx emissions reductions between **6.2 – 96.2 NOx tons/year.**	
Program/Project Considerations	***Repowers*** of existing engines shall not be considered eligible under this Environmental Mitigation Action sub-category. Replacement of Eligible ***Shuttle and Transit Buses*** with a new diesel vehicle shall not be considered eligible. Bi-fuel vehicles will be considered on a case-by-case basis for ***Government*** Owned ***Shuttle Buses*** only. Bi-fuel ***Transit Buses*** were found to not be commercially viable. See Appendix 4 of the proposed BMP for the State's proposed definition of the term "Bi-fuel."	

Class 4-8 School Bus, Shuttle Bus, and Transit Bus Summary

Eligible Applicants	Non-Government and ***Government***	
Anticipated % of Funds	60% ($27,455,948.64) for the ***Class 4-8 School Bus, Shuttle Bus, and Transit Bus*** EMA Category	
Available Funds	Initial Eligible Project Funds: $24,710,353.78 ($16,000,000 for ***Transit and Shuttle Buses*** and $8,710,353.78 for ***School Buses***) Initial Eligible Administrative Expenditures Reserve: $2,745,594.86	
	School Buses	***All-Electric*** Infrastructure Costs
Funding Cap	Up to 25% of the cost of a replacement for Non-Government Owned Up to 50% of the cost of a replacement for ***Government*** Owned Up to 75% of the cost of a replacement for ***Government*** Owned projects in current or former nonattainment areas for Ozone and/or $PM_{2.5}$ NAAQS Up to 75% of the cost of a replacement for ***Government*** Owned projects in Distressed Counties	Up to 25% of the acquisition and installation costs for associated ***All-Electric*** infrastructure for Non-Government Owned Up to 50% of the acquisition and installation costs for associated ***All-Electric*** infrastructure for ***Government*** Owned
Expected Emissions Benefits	At the proposed funding amounts and project caps, dependent on fuel and project type, the State expects to be able to fund between 30 and 384 ***School Bus*** projects. Doing so is expected to yield NOx emissions reductions between **1.4 – 44.5 NOx tons/year.** (This estimate does not include the additional NOx emissions reductions that will likely occur from the voluntary adoption and implementation of additional idling reduction policies by Tennessee school districts).	
Program/Project Considerations	***Repowers*** of existing engines shall not be considered eligible under this Environmental Mitigation Action sub-category. The State will prioritize eligible ***School Bus*** projects in school districts where an idle reduction policy for or including ***School Buses*** has been adopted as of the date a proposal is submitted.	

Light Duty Zero Emission Vehicle (ZEV) Supply Equipment

- The State proposes allocating 15% of its EMT allocation to the ***Light Duty ZEV Supply Equipment*** EMA category. As noted in Appendix D-2 to the State Trust Agreement, this is the maximum allowable percentage of EMT funds that Beneficiaries can dedicate to this category.

- According to 2014 NEI data, on-road, non-diesel light duty vehicles account for the largest contribution (40%) of NOx emissions from mobile sources in Tennessee. By increasing access and availability to ***Light Duty ZEV Supply Equipment*** across Tennessee, the State can encourage and incentivize the adoption and usage of cleaner, electric-powered light duty vehicles.

- ***Light Duty ZEV Supply Equipment*** received the second highest amount of public support of all EMA categories during the State's first public comment period. In line with the level of public support and interest expressed, the automotive industry has announced that more than 100 battery electric vehicle (BEV) models will be introduced worldwide over the next five years. As battery costs decrease and economies of scale grow, EVs are expected to reach price parity with their gasoline counterparts by 2022 or sooner. With announcements of forthcoming EV releases by most of the major automotive manufacturers, it is clear that the light-duty automotive sector is moving in the direction of electrification.

Light Duty Zero Emission Vehicle (ZEV) Supply Equipment

- With regard to State-specific economic development considerations, light-duty EV manufacturing and production in Tennessee continues to grow. Assuming that ZEV infrastructure growth accelerates EV sales, investment in this category could directly support automotive manufacturing facilities within the State.

- Notably, as of July 17, 2018, the Southeastern states of Arkansas, Virginia, North Carolina, and South Carolina have published draft BMPs that indicate support for funding the ***Light Duty ZEV Supply Equipment*** category at 15% of their respective EMT allocations. Thus, there is an opportunity for the State to pursue ***Light Duty ZEV Supply Equipment*** investments in shared corridors, such as along major highways and interstates, which could extend the regional range and viability of ZEV travel. Appendix 6 of the proposed BMP details ongoing ZEV initiatives, the results of which will impact the Light Duty ZEV sector and inform the State's program design and implementation under the ***Light Duty ZEV Supply Equipment*** EMA category.

Light Duty ZEV Supply Equipment Summary

Eligible Applicants	Non-Government and ***Government***
Anticipated % of Funds	15% ($6,863,987.16)
Available Funds	Initial Eligible Project Funds: $6,177,588.45 Initial Eligible Administrative Expenditures Reserve: $686,398.71
Funding Cap	To be determined. Funding caps for specific project types will be announced during the project solicitation phase. These funding caps shall not exceed those set forth in the State Trust Agreement for this EMA category. See Appendix 1 of the proposed BMP.
Expected Emissions Benefits	At the proposed funding amount, the State expects to be able to fund between 88 and 1,372 pieces of ***Light Duty ZEV Supply Equipment.*** Doing so is expected to yield NOx emissions reductions (dependent on station utilization) of **16.7 – 1,162.8 NOx tons/year**.
Program/Project Considerations	The State Trust Agreement allows Beneficiaries to fund the acquisition, installation, operation, and maintenance of new ***Light Duty ZEV Supply Equipment***. However, with regard to "Operation and Maintenance Costs," the State has determined that it will consider funding such costs with regard to State-owned ***Light Duty ZEV Supply Equipment*** projects only. See Appendix 4 of the proposed BMP for the State's proposed definition of the term "Operation and Maintenance Costs."

Projected Timeline for Implementation

- Following the finalization of the BMP, TDEC will release funding opportunity announcements and/or project solicitations for corresponding programs. TDEC will also host workshops throughout the State and/or via webinar in order to provide the public with information regarding the proposal process, program and project eligibility, timelines for implementation, and reporting requirements. All program-related documents and announcements will be posted to the TDEC Webpage and shared with the TDEC Email List. Additionally, announcements regarding workshops or other public events will be shared via media and/or press releases.

- TDEC plans to release separate project solicitations for each of the EMA categories. TDEC anticipates that it will employ the following order, with the first project solicitation to be released in the third quarter of calendar year 2018:
  (1) ***Class 4-8 School Buses;***
  (2) ***Class 4-8 Shuttle and Transit Buses;***
  (3) ***Class 4-7 Local Freight Trucks, Class 8 Local Freight and Port Drayage Trucks***; and
  (4) ***Light Duty ZEV Supply Equipment***.

- Additional project solicitations for these EMA categories will be released until eligible project funds are exhausted. TDEC will strive to obligate Initial Eligible Project Funds by the end of calendar year 2023.

Administrative Expenditures

- Appendix D-2 of the State Trust Agreement provides that Beneficiaries may use EMT funds for "actual administrative expenditures" associated with the implementation of an EMA. However, such expenditures cannot exceed 15% of the total cost of such EMA. The summaries in this presentation and Tables 1-4 in the proposed BMP include the Initial Eligible Administrative Expenditures Reserve for each category.

- As the Lead Agency for purposes of administering the State's EMT allocation, TDEC is responsible for the management and oversight of any related programs and projects. These administrative efforts will include, but will not be limited to, the following:
  (1) development and updating of program collateral for each EMA category (e.g., project solicitations, applications, program manuals, reporting templates);
  (2) receipt and review of project proposals;
  (3) contract development and management;
  (4) monitoring of EMT fund recipients' projects; and
  (5) compliance with the numerous reporting, audit, financial, and transparency requirements set forth in the State Trust Agreement, as well as with applicable State rules and regulations.

Certain efforts, such as those addressed in (5) above, will be necessary for the duration of the Trust, which will exist for a minimum of 10 years following the Trust Effective Date of October 2, 2017.

Administrative Expenditures

- As the level of funding TDEC receives annually from the State and federal government is not guaranteed, it is critical that the State identify a dedicated source of funding to support the administration of its EMT allocation. Thus, the State reserves the right to use up to the maximum for allowable administrative expenditures for each category, should the administration of related programs and projects warrant.

- TDEC personnel will endeavor to minimize administrative expenditures throughout the duration of the Trust so that a greater number of projects may be funded.

- The inclusion of the Initial Eligible Administrative Expenditures Reserve for each category in the tables shown in earlier slides serves two purposes. First, doing so allowed the State to calculate the amount of Initial Eligible Project Funds and the Expected Emissions Benefits for each category. Second, it provides transparency regarding the State's intent to utilize EMT funds to support the administration of its EMT allocation.

- TDEC will evaluate cumulative administrative expenditures on a semi-annual basis to determine whether any of the funds reserved for administrative expenditures can be reallocated to Eligible Project Funds. In the event Eligible Project Funds for any EMA category can be increased, the State will provide the Trustee with an updated BMP as required by the State Trust Agreement.

Consideration of Disproportionate Burden

- The State Trust Agreement requires Beneficiaries to include within the BMP a "description of how the Beneficiary will consider the potential beneficial impact of the selected Eligible Mitigation Actions on air quality in areas that bear a disproportionate share of the air pollution burden within its jurisdiction."

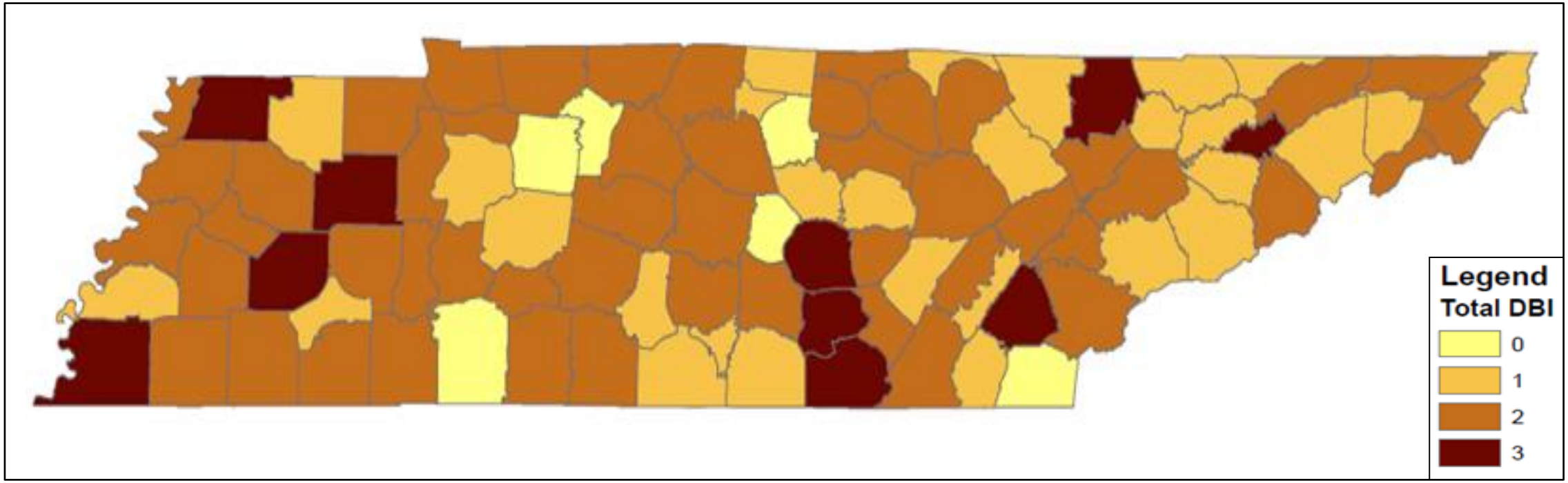
- To address these requirements, the State has developed a "Disproportionate Burden Index" (DBI), which combines environmental, economic, and demographic datasets in a geospatial format to determine geographic units in Tennessee that have the highest air quality burden.

- Given that disproportionate burden is relative to the location of a project, TDEC will utilize the DBI and its geospatial display during the proposal review phase to assist with project prioritization and selection, focusing on the location and/or service area of the proposed project. In order to afford potential applicants the ability to determine the DBI for a prospective project proposal, TDEC will upload a DBI map of Tennessee to the TDEC Webpage and include specific instructions as to its use.

Disproportionate Burden Index (DBI) Datasets

Description of Dataset	Year	Source	Threshold
Percent of Population Below Federal Poverty Level	2016	U.S. Census Bureau	Counties above statewide average of 19%
On-road NOx Emissions	2014	National Emissions Inventory	Counties with on-road NOx emissions above average of 1383 tons per year
Vulnerable Age Segments of Population (Below 14 and Above 65)	2016	U.S. Census Bureau	Counties with population above state average of 35.78%
Percentage of Population that is Minority	2016	U.S. Census Bureau	Counties with population above state average of 13.35%

Disproportionate Burden Index (DBI) by County (July 2018)



Request for Public Comment

- The *State of Tennessee's Proposed Beneficiary Mitigation Plan* has been developed in accordance with the terms of the State Trust Agreement. This proposed BMP is not a solicitation for projects. As such, this proposed BMP includes limited detail on the application or project selection processes. Such information will be provided on the TDEC Webpage after the BMP has been finalized.

- The State now requests public comment on this proposed BMP. The public comment period will remain open for thirty (30) days following the date of the release of the proposed BMP. TDEC will accept comments through 5:00pm Central Standard Time on August 17, 2018. The public is encouraged to submit comments via a public comment form accessible at https://www.tn.gov/environment/VW_BMP or via email to TDEC.OEP@tn.gov. All comments and input received will be reviewed and considered by TDEC personnel prior to the finalization of the BMP. The BMP will then be finalized, submitted to the Trustee, and released to the public.

- As part of periodic evaluations, the State may revise the final BMP as necessary to reflect major changes in project demand, the State's priorities, and/or any increases to the State's EMT allocation in future years. Interested persons and entities are advised to sign up for the VW Email List at https://signup.e2ma.net/signup/1843437/1737620/ in order to receive related email updates on topics including, but not limited to, BMP finalization, funding cycles, and project solicitation.

Contact Us!

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